

What is claimed is:

1. A method for fixing a plurality of nucleotide derivatives to a solid carrier which comprises bringing nucleotide derivatives having a reactive group at each one terminal into contact with a solid carrier having thereon reactive groups in an aqueous phase in the presence of a transferase which is capable of producing a covalent bond by rearrangement of the reactive group of the nucleotide derivative and the reactive group of the solid carrier.
2. The method of claim 1, wherein the nucleotide derivatives are those selected from the group consisting of oligonucleotides, polynucleotides, and peptide-nucleic acids.
3. The method of claim 1, wherein the transferase is selected from the group consisting of carboxyl transferase, carbamoyl transferase, and aminoacyl transferase.
4. The method of claim 1, wherein the reactive group of the nucleotide derivative or the solid carrier is selected from the group consisting of amino, carboxyl, acyl, and carbamoyl.
5. The method of claim 1, wherein the reactive group of the nucleotide derivative or the solid carrier is selected from the group consisting of amino, aldehyde, epoxy, and carboxyl.
6. The method of claim 1, wherein the reactive group is attached to the nucleotide derivative via a linking group.

7. The method of claim 6, wherein the linking group is an alkylene group or an N-alkylamino-alkylene group.

5 8. The method of claim 1, wherein the reactive group of the nucleotide derivative is γ -amide group of a glutaminyl moiety attached to the nucleotide derivative, the reactive group of the solid carrier is an amino group attached to the carrier, and the transferase is trans-glutaminase.

10 9. The method of claim 8, wherein the amino group is attached to the solid carrier by bringing a silane coupling agent into contact with the carrier.

15 10. The method of claim 1, wherein the solid carrier is selected from a glass plate, a resin plate, a metal plate, a glass plate covered with polymer coat, a glass plate covered with metal coat, and a resin plate covered with metal coat.

20 11. A nucleotide derivative-fixed solid carrier which is produced by the method of claim 1.

25 12. A process of fixing complementary nucleic acid fragments contained in a sample liquid to a solid carrier which comprises the steps of:

30 bringing a sample liquid containing labelled nucleic acid fragments into contact with a nucleotide derivative-attached solid carrier of claim 11, whereby labelled nucleic acid fragments complementary to the nucleotide derivative fixed to the carrier are combined with the nucleotide derivative by hybridization; and

35 removing not-combined labelled nucleic acid fragments from the solid carrier.